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EXAMINER

JAKOVAC, RYAN J

ART UNIT	PAPER NUMBER
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2445

NOTIFICATION DATE	DELIVERY MODE
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11/16/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/784,146	Applicant(s) NOG ET AL.	
	Examiner RYAN J. JAKOVAC	Art Unit 2445	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,9,11-14,25-28,31,33 and 35-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,9,11-14,25-28,31,33 and 35-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 08/12/2009 have been fully considered but they are not persuasive.
2. Applicant argues in summary that McCanne does not disclose sending a routing policy or incorporating a routing policy into the body of a message. The examiner respectfully disagrees. At least fig. 6 and the accompanying paragraphs [0203-0207] disclose that data packets exchanged between nodes contain a destination, a source, payload information, and an overlay header. The receiving node creates and inserts routing information into the data message. In addition, information related to the overlay network is designated in the packet in order to route the message correctly.

Regarding incorporating a routing policy in the body of a message, the Examiner has stated in the Office Action mailed 07/08/2009 that “McCanne discloses generating a routing policy for a sending node, wherein the routing policy comprises instructions for redirecting messages as described above. The routing policy of McCanne is generated and comprises instructions based on the header and the overlay header as described in at least [0203-0206] and fig. 6. It would have been obvious to one of ordinary skill in the art at the time of the invention combine generating routing policy based on the body of the message as claimed by the Applicant with the teachings of McCanne in view of McCanne's generation of routing policy based on headers or overlay headers since these differences amounts to mere variation and/or design choice. “

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3. Applicant argues that McCanne does not teach sending a message since McCanne passes information through packets, and that equating information contained in a packet to a “message” is improper. However, the Examiner respectfully disagrees. The term “packet” applies to any message formatted as a packet, and packets naturally contain data messages as is commonly understood and well known in the art. See paragraph [0002] of the Applicant’s specification:

“In large networks such as the Internet, data packets are routed to a destination by routers. These routers send and receive messages but do not otherwise process the message. “

See also paragraph [0004] of the Applicant’s specification:

“Overlay nodes process every data packet at the application level before resending the data packet to the next node in the overlay network. In addition, overlay nodes may not be optimally positioned because there is often little or no knowledge of the physical layout of the underlying network infrastructure. These factors contribute to longer latency in the overlay network. In addition, overlay routers may become a central point of failure. For example, if particular types of messages have to be routed by a single overlay router and that router fails, the messages do not reach their intended destination.”

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 25, 31, 39, and 40 are rejected under 35 USC 112.

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6. Claim 1, 25, 31 recites the limitation "the sending node". There is insufficient antecedent basis for this limitation in the claim.

7. Claim 39 and 40 recite the limitation "after returning the routing policy message". These claims are dependent on claim 1 which does not recite returning the routing policy to the sending node, therefore there is insufficient antecedent basis for this limitation in the claim.

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claim 40 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 40 recites in part "...the routing node combining the routing policy with other received routing policies into a master routing policy for nodes in the overlay network", however, there is no disclosure of a routing node combining routing policies with other received routing policies present in the specification.

Specification

10. The amendment filed 08/12/2009 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the routing node combining the routing policy

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with other received routing policies into a master routing policy for nodes in the overlay network. Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-2, 4, 9, 11-14, 25-28, 31, 33, 35-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2004/0010616 to McCanne.

Regarding claim 1, 25, McCanne teaches a method comprising:

receiving a message at a routing node in an overlay network, the message comprising a header and a body, wherein the header comprises information for routing the message (McCanne, [0034], routing address information is carried in the message header. See also [0055].);

passing the message to the application level at the routing node to process the message (McCanne, abstract, routing messages are processed at the application level. See also, [0009-0010], [0027], and [0033].);

generating by the routing node a routing policy message, the routing policy message including a routing policy, wherein the routing policy comprises instructions for routing nodes for redirecting messages, wherein redirecting is based at least in part on the body of the message (McCanne, [0044-0046], routing occurs at the application level based on exchanged messages. See also, [0203-0206], fig. 6.);

sending the routing policy message to the sending node (McCanne, [0009-0011], application level control is applied to transferred data. Nodes forward the routing messages after they routing policy is computed at the application level. See also, [0041-[0049].);

identifying by the sending node a final destination address to which to route the message based in part on the routing policy of the routing policy message (McCanne, [0055], [0166-0168], [0172], destination address is identified. See also, figs. 4-5.);

after identifying the final destination, incorporating by the sending node the routing policy into the body of the message and forwarding by the sending node the message to the final destination node in the overlay network based on the instructions (McCanne, routers forward messages and compute routes including sources and destinations. See [0044-0046], [0166-0172].).

McCanne discloses generating a routing policy for a sending node, wherein the routing policy comprises instructions for redirecting messages as described above. The routing policy of McCanne is generated and comprises instructions based on the header and the overlay header as described in at least [0203-0206] and fig. 6.

It would have been obvious to one of ordinary skill in the art at the time of the invention combine generating routing policy based on the body of the message as claimed by the Applicant

with the teachings of McCanne in view of McCanne's generation of routing policy based on headers or overlay headers since these differences amounts to mere variation and/or design choice.

Regarding claim 11, McCanne teaches the method of claim 1, further comprising receiving a plurality of routing policies at a sending node from a plurality of routing nodes in the overlay network (McCanne, [0132], tracking group membership at an overlay node. See also, fig. 5.).

Regarding claim 13, McCanne teaches the method of claim 1, further comprising applying a transport policy to the message by the sending node after changing the address in the header of the message (McCanne, [0034], [0055], modification of header information including address.), wherein the transport policy defines which transportation protocol with which to send the message (McCanne, [0012], [0049-0050].).

Regarding claim 31, 37, McCanne teaches a computer program storage medium storing a computer program for executing on a computer system a computer process, the computer process method, the method comprising: identifying at least one routing policy for a message, the message comprising a header and a body, wherein the header comprises information for routing the message (McCanne, [0034], routing address information is carried in the message header. See also [0055].), wherein the routing policy comprises instructions for redirecting messages based at least in part on content of the body of the message (McCanne,

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[0044-0046], routing occurs at the application level based on exchanged messages. See also, fig. 6.); changing an address in the message to bypass at least one node in an overlay network based on the at least one routing policy (McCanne, fig. 5. See also [0176].); identifying a final destination address to which to route the message (McCanne, [0055], [0166-0168], [0172], destination address is identified. See also, figs. 4-5.); incorporating the routing policy into the body of the message and issuing the message in the overlay network directly to the final destination node (McCanne, [0055], [0166-0168], [0172], destination address is identified. See also, figs. 4-5.); and sending the at least one routing policy to a sending node in the overlay network (McCanne, routers forward messages and compute routes including sources and destinations. See [0044-0046], [0166-0172].).

Regarding claim 4, 26, 36, McCanne teaches the method of claim 1, wherein generating the routing policy is at an application level in the routing node (McCanne, [0051-0055], [0166-0168], [0172], destination address is identified. See also, figs. 4-5.). McCanne does not expressly disclose wherein a compression policy is applied to the message prior to forwarding the message to the final destination node in the overlay network. However, it would have been obvious to one of ordinary skill in the art at the time of invention to apply a compression policy with the method of McCanne in order to encode information using fewer bits, thereby reducing the consumption of resources. See *KSR v. Teleflex*, 550 U.S. ___, 127 S. Ct. 1727, 82 U.S.P.Q.2d 1385 (2007).

Regarding claim 9, 14, 28, 35, 38, McCanne teaches the method of claim 1, further comprising: applying a transport policy to the message only after applying each identified

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routing policy to the message , wherein the transport policy defines a transportation protocol over which to transport the message (McCanne, [0012], [0049-0050].), further comprising iteratively applying by the node a plurality of routing policies to the message, each of the plurality of routing policies modifying the address in the message (McCanne, [0044-0052], overlay multicasting.) McCanne does not expressly disclose applying an encryption policy prior to forwarding the message to the final destination node in the overlay network. However, it would have been obvious to one of ordinary skill in the art at the time of invention to apply an encryption (i.e. security) policy with the method of McCanne in order to facilitate secure communications, which is a well known advantage in networking environments. See KSR v. Teleflex, 550 U.S. ___, 127 S. Ct. 1727, 82 U.S.P.Q.2d 1385 (2007).

Regarding claim, 33, McCanne teaches the system of claim 31 wherein the method further comprises iteratively applying a plurality of routing policies to the message, each of the plurality of routing policies changing the address in the message (McCanne, [0048-0053], [0115-0120].).

Regarding claim 2, 12, 27, 39, McCanne teaches the method of claim 1, further comprising: after passing the message to the application level at the routing node, modifying an address of the header of the message, to create a modified address (McCanne, [0034], [0055], modification of header information including address.); after generating the routing policy for the sending node based at least in part on the body of the message, determining from the message if the sending node does not have routing policy instructions derived from the body of the

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message after the message is passed to the application level of the routing node (McCanne, [0051-0055], [0166-0168], [0172], destination address is identified. See also, figs. 4-5.); and generating the routing policy based on the modified address (McCanne, [0051-0055].). McCanne does not expressly disclose returning the routing policy to the sending node if it is determined that the sending node does not have routing policy instructions derived from the body of the message, however the routing nodes of McCanne forward routing messages between each other in order to route messages. It would have been obvious to one of ordinary skill in the art at the time of the invention to use basic error checking, such as making sure there was routing policy data contained in the message, and if not, returning the routing policy to the sending node.

13. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 2004/0010616 to McCanne in view of US 2003/0120817 to Ott et al (hereinafter Ott).

Regarding claim 40, McCanne teaches the method of claim 1, further comprising: after returning the routing policy message to the sending node. McCanne does not expressly disclose the routing node combining the routing policy with other received routing policies into a master routing policy for nodes in the overlay network.

However, Ott discloses the routing node combining the routing policy with other received routing policies into a master routing policy for nodes in the overlay network (Ott, [0023].).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of McCanne and Ott in order to create content routing tables for forwarding packets through a network (Ott, [0023].).

Conclusion

14. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RYAN J. JAKOVAC whose telephone number is (571)270-5003. The examiner can normally be reached on Monday through Friday, 7:30 am to 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on 571-272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ryan Jakovac/

/VIVEK SRIVASTAVA/

Supervisory Patent Examiner, Art Unit 2445